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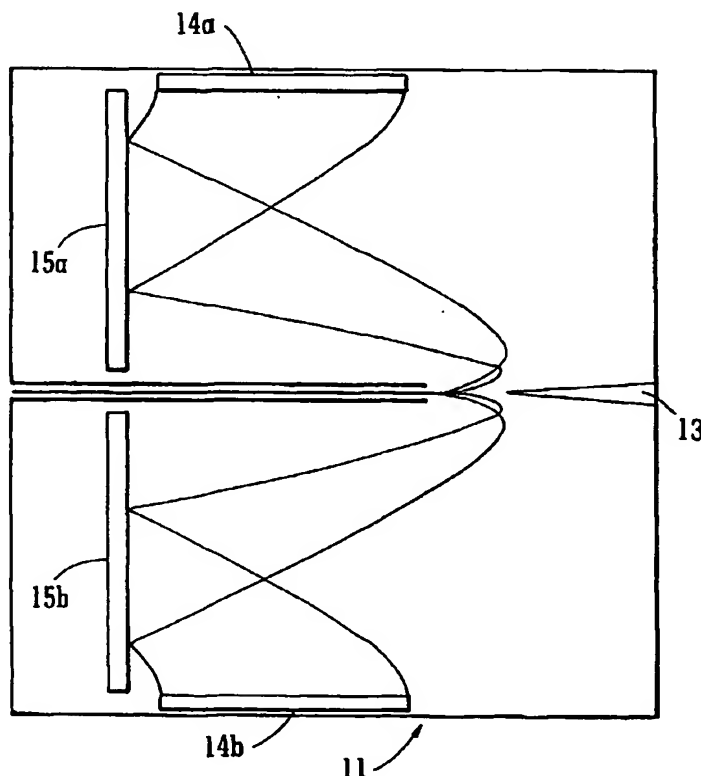
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(54) Title: MASS SPECTROMETER



(57) Abstract: A magnetic sector mass spectrometer is disclosed comprising an ion detector (11) wherein a reflecting electrode (13) is used to divide an ion beam in the direction of mass dispersion into two separate ion beams. The two ion beams are directed onto two detectors which preferably comprise two or more conversion dynodes (15a, 15b) and two or more corresponding microchannel plate detectors (14a, 14b) to detect electrons produced by the conversion dynodes (15a, 15b). If the signal from the two detectors differs substantially then the ion beam can be determined to include interference ions. Conversely, if the signal from the two detectors is substantially the same then the ion beam can be determined to be substantially free from interference ions.

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